

REMARKS

The present application includes claims 1-4, 6-19, 21-22 and 74-156. Claims 5, 20, 23-24, 36-45, 65-66 and 73 of the IPER are reinstated as claims 77, 78, 79-80, 81-90, 91-92 and 93. Claims 77 and 78 were amended relative to claims 5 and 20 of the IPER by removing the multiple dependence. Claims 1 and 14 were amended as discussed below. Claims 74-76 and 94-156 are new. Claims 74-75 and 94-96 are supported at least by Figs. 1 and 2. Claim 76 finds support at least in original claim 1. Claims 97, 112, 122 and 129 find support at least on page 18, line 28. Claims 98, 111 and 121 find support at least in Fig. 1B and page 17, lines 6-8. Claims 99 and 132 find support at least in Fig. 1B.

Claims 100, 133, 146, 149 and 150 find support at least on page 16, lines 13-14. Claims 101, 110 and 135 find support at least on page 17, lines 6-8. Claims 102, 131, 137, 143, 146, 147 and 148 find support at least on page 20, lines 9-16. Claim 103, 113, 114, 123, 124, 138, 150, 151 and 159 find support at least on page 16, lines 31-34. Claims 104, 115 and 125 find support at least on page 16, lines 16-18. Claims 105 and 116 find support at least on page 17, lines 3-8. Claims 106, 117 and 126 find support at least on page 17, line 1. Claims 107, 118 and 140 find support at least on page 8, line 2. Claims 108, 119 and 127 find support at least on page 3, lines 6-7. Claims 109, 120, 128, 130, 136, 142 and 145 find support at least on page 17, lines 26-27. New claims 134, 141 and 144 find support at least in the description of Figs. 2A-2F. Claim 139 finds support at least on page 16, lines 32.

Claims 154 and 158 find support at least in Fig. 1B. Claims 155 and 156 find support at least on page 17, lines 17-22. Claim 157 finds support at least on page 18, lines 28-30.

In the IPER, claims 36-41, 65-66 and 73, which correspond to new claims 81-86, 91-92 and 93 were indicated as being patentable.

Claims 1-4 and 6-13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Fig. 1 of Gifford (5,695,504).

Claim 1 was amended in accordance with the IPER to clarify that each of the spikes is adapted to transfix the graft and to penetrate the target vessel. In addition, in view of Fig. 30 of Gifford, claim 1 was amended to clarify that the collar section is radially thin. In addition, the claim was broadened by replacing the term 'engage' by the broader term 'surround'. The term engaged is used in new dependent claim 76.

Regarding Fig. 1 of Gifford, claim 1, as amended, requires that the spikes transfix the graft and penetrate the target vessel. In the embodiment of Fig. 1 of Gifford, the spikes attach

only to the blood vessel, while the graft connects only to coupling member 102 (col. 13, lines 28-30) and therefore is not transfixated by the spikes. It is noted that the purpose of coupling member 102 is to grasp the graft (as is evident, for example, from its name) and if this task were performed by the spikes, the coupling member 102 would not be necessary.

Regarding Fig. 30 of Gifford, Gifford uses a radially wide collar section in order to lock the spikes. A radially thin collar section would not be able to lock the spikes and would therefore not serve the purpose of the collar as taught by Gifford. Therefore, Gifford does not teach or suggest using a radially thin collar. In the present application, the radially thin collar is used for other purposes than to lock the spikes. It is the flanges that are connected to the radially thin collar that lock the spikes, as shown in Figs. 1 and 2 of the present application.

The dependent claims are patentable at least because they depend on an allowable claim. For brevity, applicants do not discuss each dependent claim separately.

New independent claim 94 also relates to an anastomosis connector having separate collar and spike portions. Claim 94 requires a spike section having spikes adapted to transfix a graft and penetrate a blood vessel. As discussed regarding claim 1, the embodiment of Fig. 1 of Gifford does not teach or suggest such a spike section.

Claims 14-19, 21 and 22 stand rejected under 35 U.S.C. §102(b) as being anticipated by Razgulov (3,908,662). Claim 14 was amended to follow the language in the IPER which was indicated as being allowable in the IPER.

Reinstated claims 86-89 correspond to IPER claims 42-45 which were indicated in the IPER as being anticipated by Gifford III, especially figures 42A-42D. Applicants respectfully disagree. Claim 86 requires releasing at least one forward spike of the connector. This limitation is not taught or suggested by Gifford, since Gifford relates to a backward spike.

Claims 97, 110, 121, 129, 134, 140 and 145 require at least one lock element. The only embodiment that applicants found in Gifford to describe a locking element is that of Figs. 30, mentioned on column 40, lines 23-27. However, as can be seen in the figures, Gifford does not teach or suggest a lock on the aperture elements as required by claims 110 and 134, does not teach locking against a spike as required by claims 97 and 129, and does not teach having each lock element correspond to an aperture element, as required by claim 121. In addition, Gifford does not teach locking by retraction of the at least one of the spikes, as required by claim 142 or locking in a connecting procedure in which the blood vessel is penetrated by the spikes after the spikes are inserted into the apertures, as required by claim 145. Gifford shows locking by moving a flat ring onto a collar holding the spikes.

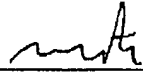
Claim 147 requires a movement restriction element which is adapted to move into a fixation state in which some movement of the spike tips relative to each other is allowed. Gifford does not teach any such fixation state in which some movement is allowed. In Gifford, once the connector is locked no relative movement is allowed.

Claims 152 requires that the connector have an open structure between the aperture elements. As can be seen, for example, in Figs. 1, 30B and 31 of Gifford, Gifford did not teach or suggest such an open structure.

Claim 158 requires a plurality of apertures defined by aperture elements in an annular ring shaped two-dimensional space around a graft, which has free space between each two adjacent aperture elements. This is not taught or suggested by Gifford.

In view of the above amendments and remarks, applicants believe the application is allowable. Consideration of the previously cited art and allowance of the application are respectfully requested.

Respectfully submitted,
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